

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

TITLE V (DRAFT) No. V-06-028

CARPENTER COMPANY

RUSSELLVILLE KY.

AUGUST 24, 2006

MARK LABHART, REVIEWER

SOURCE I.D. #: 021-141-00012

SOURCE A.I. #: 2751

ACTIVITY #: APE20050001

SOURCE DESCRIPTION:

Carpenter Company makes flexible polyurethane foam and other comfort cushioning products. The main operation is slabstock foam production. The foam is produced in large “buns” which can then be cut to make many different products. Slabstock trim scrap is used in rebond production. Here the scrape foam is ground into small pieces that are bonded together in a large mold. The molded rebond foam can then be sliced into desired shapes.

Foam fabrication is another process taking place at Carpenter. In the fabrication process foam pieces are glued to backing materials or glued to each other to make intricate shapes. The foam fabrication process is very different than either slab stock or rebond production. The foam is completely cured so there are no emissions for the foam itself. Emissions from the fabrication process are from the adhesives used to bond the pieces together.

Carpenter also produces cushioning products using adhesive bonded and thermally bonded polyester fibers. VOC and HAP are emitted from the adhesives, but the thermal bonding process has negligible emissions. Remaining equipment and operations at Carpenter are support for the previously described operations, i.e. facility boilers, bulk material handling equipment, railcar unloading, etc.

COMMENTS:

1. The permit contains Federally Enforceable Limitations on HAP emissions which precludes applicability of the following regulations:
 - a. 40 CFR Part 63, Subpart III – National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production
 - b. 40 CFR Part 63, Subpart M—National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam Fabrication Operations
 - c. 40 CFR Part 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters
 - d. 40 CFR Part 63, Subpart EEEEE—National Emissions Standards for Hazardous Air Pollutants: Organic Liquids Distribution

2. **40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units; is not applicable**, as all boilers were commenced prior to June 9, 1989.
3. **40 CFR Part 60, Subpart K—Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978; is not applicable** to the 200,000 gallon diesel tank. § 60.111 Definitions, excludes diesel fuel from the definition of a petroleum liquid.
4. **401 KAR 59:050. New storage vessels for petroleum liquids; is not applicable** to the 200,000 gallon diesel tank as Section 2 (3) excludes diesel fuel from the definition of a petroleum liquid.
5. **40 CFR Part 60, Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984; is not applicable**.
 - a. The twenty-seven (27) indoor storage tanks each have a capacity less than 75 m³ (19,813 gallons).
 - b. The two (2) outdoor 400,000 gallon tanks were constructed prior to July 23, 1984
6. There are (2) cyclones used as part of the scrape grinding operation in rebond production, EU-03. These cyclones are not considered as control devices, because the primary function of these cyclones is the separation of the foam particles from the airstream used for conveyance. The Elutriator is used in a similar manner, (sorting foam pieces), with no direct exhaust from this piece of equipment. Therefore no emissions or emission control credit is assumed for the Elutriator.

EMISSION AND OPERATING CAPS DESCRIPTION:

Carpenter Company has requested voluntary Synthetic Minor permit emission limits of 225 tons per year VOC, plus additional limits on Hazardous Air Pollutants (HAP) of 9.0 tons per year or less for individual HAPs and 22.5 tons per year or less for all combined HAP emissions.

OPERATIONAL FLEXIBILITY:

Carpenter Company is not restricted as to hours of operation or quantity of product produced while remaining within the caps above.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.